

IN THE CLAIMS

Please amend claims 1-44 as follows.

139 1. Hydrokinetic coupling apparatus, comprising a casing (30) having a transverse wall (3) adapted to be hydrokinetically coupled in rotation to a driving shaft, a turbine wheel (12) mounted within the casing (30) and fixed to a hub (14) which is adapted to be coupled in rotation to a driven shaft, a fixed first surface (1) on the transverse wall (3) of the casing (30), and a lock-up clutch interposed between said turbine wheel (12) and said transverse wall (3) and comprising a piston (4) carrying a second surface (2), which lies facing the first surface (1) for coupling it releasably to the transverse wall, wherein a friction means (60) acts between a face of the piston (4) opposite the second surface (2) and an element situated in facing relationship thereto, wherein the piston (4) is so configured as to carry the friction means (60).

2. Hydrokinetic coupling apparatus according to Claim 1, wherein one of the friction means (60) and the piston (4) has at least one projecting element (61, 166, 1066, 1466, 2066, 2067) engaged in a complementary hole (62, 66, 161, 164, 266, 1266, 2068) of the other one of the piston (4) and friction means (60).

3. Hydrokinetic coupling apparatus according to Claim 2, wherein the hole (62, 66, 161, 164, 266, 1266, 2068) is a blind hole.

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4. Hydrokinetic coupling apparatus according to Claim 3, wherein the blind hole (62) is one of press-formed, formed by drilling partway through and by extrusion.

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cont through hole.

5. Hydrokinetic coupling apparatus according to Claim 2, wherein the hole (161) is a

6. Hydrokinetic coupling apparatus according to Claim 5, wherein the hole (66) has an oblong circumferential form.

7. Hydrokinetic coupling apparatus according to Claim 5, wherein the hole (164, 161) is cylindrical.

8. Hydrokinetic coupling apparatus according to Claim 2, wherein rivet means (366, 666, 966, 1166) are interposed between the friction means (60) and the piston (4).

9. Hydrokinetic coupling apparatus according to Claim 8, wherein the piston (4) carries at least one rivet (966, 1266) of the rivet means for fastening the friction means (60).

10. Hydrokinetic coupling apparatus according to Claim 9, wherein the at least one rivet (666) is carried by the piston (4).

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11. Hydrokinetic coupling apparatus according to Claim 9, wherein the at least one rivet (966) is integral with the piston (4).

12. Hydrokinetic coupling apparatus according to Claim 8, wherein a head of the rivet (366) is engaged in a housing in the friction means (60).

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13. Hydrokinetic coupling apparatus according to Claim 7, wherein the friction means (60) is of synthetic material and comprises at least one body (261) engaged in the hole in the piston (4) and sealingly closing off said hole (161) after hot working.

14. Hydrokinetic coupling apparatus according to Claim 11, wherein a rivet head (966) is engaged in a rebate (866) in the friction means (60) after deformation.

15. Hydrokinetic coupling apparatus according to Claim 1, wherein the friction means (60) is formed by moulding over a projecting portion (1066, 1166) of the piston (4).

16. Hydrokinetic coupling apparatus according to Claim 2, wherein snap-fitting means (166, 1466, 161) are interposed between the piston (4) and the friction means (60).

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17. Hydrokinetic coupling apparatus according to Claim 16, wherein the piston (4) has a projecting portion (1066) with a bead (1166), which may be of divided form, engaged in a hole of the friction means (60).

18. Hydrokinetic coupling apparatus according to Claim 17, wherein the friction means (60) includes a point engaged in a groove of a projecting portion (1066), having a terminal bead (1067), of the piston (4), and wherein the groove is delimited by the piston (4) and the bead (1067).

19. Hydrokinetic coupling apparatus according to Claim 16, wherein at least one resilient lug (1466) having claws is engaged in said hole in the piston (4).

20. Hydrokinetic coupling apparatus according to Claim 2, wherein a seaming means (1066, 766) is interposed between the piston (4) and the friction means (60).

21. Hydrokinetic coupling apparatus according to Claim 18, wherein the piston (4) has a projecting portion (1066, 2066) which is deformed by plastic flow of material into contact with a surface of the friction means (60) facing away from the piston (4).

22. Hydrokinetic coupling apparatus according to Claim 21, wherein the surface (766) is defined by a reduction in thickness.

23. Hydrokinetic coupling apparatus according to Claim 22, wherein the friction means (60) consists of a ring.

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24. Hydrokinetic coupling apparatus according to Claim 23, wherein the friction means (60) consists of a plurality of annular sectors (160).

25. Hydrokinetic coupling apparatus according to Claim 23, wherein the hub (14) has a radial plate (15) fixed to the turbine wheel (12), and in that the friction means (60) acts between the radial plate (15) and the piston (4).

26. Hydrokinetic coupling apparatus, comprising a casing (30) having a transverse wall (3) adapted to be hydrokinetically coupled in rotation to a driving shaft, a turbine wheel (12) mounted within the casing (30) and fixed to a hub (14) which is adapted to be coupled in rotation to a driven shaft, a fixed first surface (1) on the transverse wall (3) of the casing (30), and a lock-up clutch interposed between said turbine wheel (12) and said transverse wall (3) and comprising a piston (4) carrying a second surface (2), which lies facing the first surface (1) for coupling it releasably to the transverse wall (3), wherein the turbine wheel (12) includes an annular ring (13) which may be of divided form and which is fixed to the hub (14) by means of at least one rivet (59), and wherein a friction means (60) acts between the hub (14) and the piston (4), and wherein the friction means (60) is carried by said at least one rivet (59).

27. Hydrokinetic coupling apparatus according to Claim 26, wherein at least one rivet (59) has a head projecting towards the piston (4) and having a thickened portion (159, 259) for fastening the friction means (60).

28. Hydrokinetic coupling apparatus according to Claim 27, wherein the thickened portion (159, 259) is at the free end of the head.

29. Hydrokinetic coupling apparatus according to Claim 28, wherein the thickened portion (159) is of constant width.

30. Hydrokinetic coupling apparatus according to Claim 29, wherein the thickened portion (259) is joined to the free end of the head through a portion of penetrating form.

31. Hydrokinetic coupling apparatus according to Claim 30, wherein the friction means (60) is moulded in place on the head.

32. Hydrokinetic coupling apparatus according to Claim 31, wherein the friction means (60) is snap-fitted on the thickened portion (159, 259).

33. Hydrokinetic coupling apparatus according to Claim 32, wherein the friction means (60) has a blind cavity (359) open towards the hub (14) for accommodating the thickened portion (159, 259).

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34. Hydrokinetic coupling apparatus according to Claim 33, wherein the cavity (359) is delimited by L-shaped lugs (459) which are elastically deformable transversely and which are adapted to come into engagement with the face of the thickened portion facing away from the piston (4).

35. Hydrokinetic coupling apparatus according to Claim 30, wherein the friction means (60) is mounted on the thickened portion (159, 259) by a fitting whereby one member at least partially passes into another member.

36. Hydrokinetic coupling apparatus according to Claim 30, wherein the friction means (60) has, firstly, a cavity (360) open axially away from the piston (4) and being of oblong form circumferentially, for receiving the thickened portion (159), and secondly, an axially oriented passage (363) open on the side of the piston (4), and in that the passage is so dimensioned as to enable the thickened portion to penetrate into the cavity before being riveted on the hub.

37. Hydrokinetic coupling apparatus according to Claim 36, wherein the cavity (360) includes at least one hole (362) through which riveting is carried out.

38. Hydrokinetic coupling apparatus according to Claim 38, wherein the piston (4) surrounds the axially oriented annular portion (16) of the hub (14) with a radial clearance.

39. Hydrokinetic coupling apparatus according to Claim 38, wherein the piston (4) is coupled to the casing (30) by axially elastic tongues (23), and wherein the tongues (23) are radially outside the second surface (2).

40. Hydrokinetic coupling apparatus according to Claim 39, wherein the friction means (60) has at least one passage (400) between its inner and outer peripheries to permit passage of a fluid.

41. Hydrokinetic coupling apparatus according to Claim 40, wherein the friction means (60) consists of a ring having, in at least one of its faces, a passage extending from its inner periphery to its outer periphery.

42. Hydrokinetic coupling apparatus according to Claim 41, wherein the piston (4) is coupled to the casing (30) by axially elastic tongues (23), and wherein the tongues (23) lie facing the second surface.

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43. Hydrokinetic coupling apparatus according to Claim 42, wherein the friction means (60) comprise a plurality of friction elements.

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44. Hydrokinetic coupling apparatus according to Claim 43, wherein the friction means (60) is mounted with an axial clearance with respect to the thickened portion (159), and wherein the friction means (60) is in direct engagement on one of the turbine hub and the turbine wheel (12).
